

Arbeit zu begründen. Hierbei sollen die Versorgungs-, die Eigen- und die Gemeinarbeit, die sich im historischen Verlauf von der heutigen Erwerbsarbeit ausdifferenziert und weiterentwickelt haben, wieder zu einem Ganzen zusammengefügt werden. Die Integration dieser Bereiche kann als wichtiges Instrumentarium verstanden werden, um kreative Potenziale für den weiteren gesellschaftlichen Prozess im Hinblick auf nachhaltige Entwicklungsmöglichkeiten zu begründen. Hierbei wird deutlich, dass sich die Diskussion sehr schnell im Bereich der Suffizienzstrategien, bzw. im philosophischen Diskurs nach der Suche nach einem „guten Leben“ (sozialverträgliche und ökologische Lebensformen) bewegt. Die lebhaften Diskussionen im Rahmen des Kongresses spiegeln sehr stark diesen Diskurs beispielsweise in der Forderung nach einem breiten Diskurs über elementare ethische Grundprinzipien des menschlichen Daseins, über neue Formen der Honorierung menschlicher Aktivitäten oder über die soziale Würdigung bisher rein weiblicher Arbeitsformen.

Die normative Kraft des Konzeptes wurde nicht zuletzt von der WZB-Projektgruppe glaubhaft vertreten, an der theoretisch-analytischen Schärfe des Konzeptes sollte, das haben die verschieden kritischen Anstöße gezeigt, weiter gearbeitet werden. Die praktische Umsetzung einer gesamtgesellschaftlichen Strategie für Deutschland steht noch aus. Die Institutionalisierung eines Rates für Nachhaltigkeit in Deutschland trägt, so *Jürgen Minsch* aus dem ehemaligen schweizerischen Nachhaltigkeitsrat, momentan eher den Charakter einer „Militärparade, die mit gewaltigen Schritten durch Berlin zieht“. Bleibt abzuwarten, ob das kreative Potenzial des integrativen Ansatzes angesichts der gesellschaftlichen Realität Wurzeln schlagen kann.

Anmerkung

* *Deutsches Institut für Wirtschaftsforschung; Wuppertal Institut für Klima, Umwelt, Energie; Wissenschaftszentrum Berlin für Sozialforschung*, (2000): Verbundprojekt: Arbeit und Ökologie. Abschlussbericht. Gefördert von der Hans-Böckler-Stiftung im Schwerpunkt „Perspektiven der Arbeitsgesellschaft“. Berlin, Wuppertal.

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SOWING-Conference: Regional Paths in the European Information Society

Conference report by Michael Rader and Gotthard Bechmann, ITAS

Introduction

The conference took place on the 2nd and 3rd of November 2000 at Karlsruhe Research Centre. It was staged by ITAS within the framework of the EU project “*Information Society, Work and New Forms of Social Exclusion (SOWING)*”. The project has been supported in the framework of the TSER Programme (Targeted Socio-Economic Research) since January 1998. The conference had the dual aims of presenting the first results from this research and of at the same time discussing the various paths to a European Information Society.

The centrepiece of the event was the advancing informatisation of industrial and public organisations and their related work procedures. Informatisation does not primarily mean the introduction and application of new technologies, but the penetration of all processes of organisation and work by activities dealing with information. The introduction of new information and communication technologies is regarded as a strategy to completely overhaul industries, administrations and working processes with the aim of adapting them to the conditions of an increasingly globalised society. ICTs are more and more used to rationalise, accelerate, and support information and communication activities.

The opening plenary

The plenary session on the first day was devoted to the more general aspects of the topic.

In his introductory presentation: “Towards the European information society – Convergence or Divergence” *Professor. Gerd Schienstock* (Work Research Centre, University of Tampere, Finland), the leader of the SOWING project, gave an overview of the project and presented its first results.

The SOWING project unites research groups from Belgium, Germany, England, Finland, Ireland, Italy, Austria and Portugal and was scheduled for a duration of three years.

Its aim is to describe the infomatisation of firms in the manufacturing and service industries in selected regions of these countries from a comparable perspective with respect to prevailing technological practices.

From the scientific point of view it represents an approach to investigating the information society which unites previously largely independent approaches, mainly of technological, economic or sociological origin. Of particular technological interest is the collection of experience and data on technological application concepts in an international comparison.

The conceptual instrument for the empirical observation of corresponding changes inside enterprises and their social environment is "*technological practice*", which is understood in the sense that it encompasses technological and social elements. The versatility of this term is, for example, demonstrated by the fact that it can be used to link with the classic discussion on "enterprise culture". Even the case of celibacy with respect to new technologies can be described as "technological practice". The term in particular does not restrict itself to the formal organisational structure of the firm, but also extends to the formal and informal structures of the world of work, thus, for instance, adequately addressing the special issue of new forms of social exclusion in connection with the new technologies.

First empirical results on the function of ICTs in processes of the reorganisation of companies are then described and confronted with the results of research on issues related to new forms of "social exclusion".

It is apparent that ICTs play a multi-functional role in the process of the reorganisation of firms and enterprises and that their application depends on cultural, political and social factors. There is no causal relationship between new technologies and new forms of organisation. Instead the technologies open up the opportunity for the development of new forms of organisation, just as changes to management strategies and organisational structures facilitate the creative application of technologies.

Likewise, it is not possible to identify any causal impact of ICTs on the structure of employee skills. Neither the thesis of downgrading of skills nor that of upgrading can be confirmed. Both are too simple to be able to describe the real process. Although the application of ICT does create a demand for new competence required for the emerging information society, these are too broad (e.g. communicative skills, creativity, social ability for negotiations and self-organisation) to relate them definitely to a profile of technological requirements. New types of social inclusion and exclusion are emerging that can no longer be attributed to social class or formal education. In the last part of his presentation Schienstock illustrated, which regional and national differences exist on the path towards a European information society.

The second presentation by *Professor Frank Webster* (University of Birmingham, UK): "Globalisation, nations and culture in the information era" discussed the global dimension of the emerging information society.

In his view we can get a better understanding of the world today not by emphasising the new, but by looking to ongoing trends which are certainly accelerating, but which have been in evidence for many years. Commentators so easily get engrossed with their own times that they readily fall for the trap of "presentism", for believing that things are radically different from what went before. And of course to a degree that is self-evidently true. All historical circumstances are singular. Nonetheless, a look at longer-term developments helps contain an over-enthusiasm for the now. So he stepped away from the "information society" framework and tried to situate what is happening in the context of developments over the past few decades. His major concern was to ask: what is happening in the world today, particularly with regard to the more advanced and affluent societies of Europe, North America and the Far East? What are the major contours of development and what options and constraints do these trends present? It was seen that information is indeed central to what is taking place, though he doubted that talk of an "information society" does very much to illuminate what is actually going on.

The plenary session was brought to a close with a presentation by *Professor Ian Miles* (University of Manchester, UK): "Rethinking organisation in the information society". He dealt with the experience that we have up to now gained with the introduction of new information technologies. He argued that the new Information Technology has been with us for over a quarter of a century, and has been used pervasively in many industrial processes. However, we are still only at the dawn of the information society – or perhaps it is more accurate to say we are moving from the early stages of information society to the more advanced stages. What we are now seeing is the wide-scale use of information networks to link individuals and organisations one with another – the "networking society" rather than the passive "network society". Arguably this is bringing about a resolution of Solow's productivity paradox: certainly it is reflected in the creation and creative destruction of organisational strategies and even new organisational forms.

He explored these issues, and considered especially how the social construction of new networks and electronic marketplaces may lead to very different kinds of information society – and dominant organisations – emerging.

Session 1: Social Exclusion and the changing nature of work

(report by *Bettina-Johanna Krings*, ITAS)

The presentation of the section's results will start with the words by Martin Luther King in March 1968 which were cited at the end of the section:

"There is nothing new about poverty. What is new is we now have the techniques and the resources to get rid of poverty. But the real question is whether we have the will."

This statement shows two aspects, which were discussed intensively by the participants:

- Does the so-called New Economy create a new quality of social exclusion or do the traditional concepts of racism, sexism and social discrimination still matter?
- What social and political strategies have to be implemented in order to avoid social exclusion?

According to the changing nature of work three principal problem areas can be identified. These areas were introduced as an input into the section by *Bettina-Johanna Krings*, ITAS:

- 1) Changes in the regulation of working-hours, which lead to further individualization and to the deregulation of institutional systems of protection.
- 2) Changes in employment relationships, which lead to an increasing fragmentation of the negotiating parties responsible.
- 3) Changes in institutional conditions. The conditions for legal regulations become unclear and ambiguous.

The presentations by *Ursula Huws*, United Kingdom; *Francesca Carrera*, Italy; *Volker Hielscher*, *Robert Blum*, and *Anita Mohard* from Germany were based on these problems and created a linkage to the varied forms of social exclusion.

The participants of the section discussed the topic from a very broad perspective, where both the top-down-approach and different bottom-up approaches were connected. The combination of theory and practise was viewed as very interesting. The examples from the practical fields, e.g. by *Robert Blum* from a skill promotion centre, showed impressively that the individual conflicts which arose from the changing nature of work are to a large extent not recognised in the theoretical concepts.

In order to structure the discussion, different external and internal factors creating or avoiding the exclusion of social groups from the labour market were identified.

External aspects are for example:

- the pressure of the market,
- the logic of the public protection systems,
- the re-structuring of branches and sectors.

Examples for internal aspects are:

- the integration of flexible forms of work,
- a higher demand on the qualification of the employees,
- individual insecurity, which is no longer covered by legal conditions.

The different presentations showed that there is an increasing imbalance between individual insecurity, welfare and social protection. This generally creates different types of vulnerabil-

ity in the working situations. The risk factors are mostly age, sex and a low level of qualification.

Reflecting the concepts of the Information Society with regard to Social Exclusion both on the theoretical and political levels, the question should be: "How to support a social network to create new forms of labour?"

This approach should integrate the following aspects:

- the fundamental right of a social citizenship, that means the right to a minimum income (access to the New Economy market);
- integrated, multidimensional strategies which are connected to the local, national and international context;
- the integration and participation by the people concerned. They must be involved as full partners. The top-down concepts often do not reflect the real problems and needs the excluded people have. Political strategies and objectives have to be defined with their participation and above all these strategies should give people the right to decide about their own lives and labour activities.

Session 2: Organizational Change in the Information Society: balancing between "Everything is New" and "Nothing is New"

(report by *Professor Dr. Geert Van Hootehem, University of Leuven, Belgium*)

The discussion in this session on organizational change departed from the so-called "Everything is New"-thesis (EINT), which is dominating the Information Society debate to a large extent. The potential of information and communication technologies (ICT) has significantly altered existing organization structures and associated expectations. The implementation and ongoing penetration of modern ICT is bringing about a new global service economy, which is driven and built around knowledge. New organizations and business environments emergence out of the left-overs of the old industrial order. These changes relate to the inter-organizational and intra-organizational division of labour and have far-reaching implications

for jobs and employees. Human resource management has to adapt itself and become knowledge management. Institutions are heavily pressurised; deregulation and liberalisation are at the order of the day. We are the witnesses of the "Death of Time and Distance" in a 24 hours global economy. The End of Organized Capitalism (Lash and Urry 1987) is a fact, the Rise of the Network Society (Castells 1996) has begun.

The session on organizational change submitted the EINT-argumentation to a critical test. *Gerhard Fuchs* examined the degree of applicability of EINT to the Multimedia Industry. He demonstrated that the Multimedia Industry, built around new ICT-applications, is especially localised in concentrated areas. Apparently, the Information Society does not bring forward radical changes in the field of localisation preferences. The reasons are quite obvious. Concentration in the same region provides a pooled market for workers with specialised skills. The same argumentation can be made for specialised suppliers. Their concentration allows for the provision of a greater variety of inputs. More surprising is that, despite the potential of ICT, inter-firm information flows are enhanced by physical proximity. By concentrating within one and the same industrial district, firms can easily take advantage of technological spill-overs. It has been argued that electronic communication is not so much a substitute, but rather a complement of face-to-face contacts.

This last argumentation fits very well with the observation of *Raimund Hasse* that the network society not necessary implies networking between organizations but networks can also develop across organizations. Parts of organizations, i.e. employees, can operate very closely with other organizational parts, also employees, without entire organizations operating in a hybrid networking structure. "Con-colleagues" is the metaphor to describe this phenomenon between old and new co-operation practices. This loose co-operation does not need spatial disconnection: on the contrary, it functions at its best in the immediate vicinity of the co-operating parties. The discrepancy between the observed spatially concentrated networking across organizations and the mainstream predicted spatially dis-

persed networking between organizations has been explained by Hasse as a consequence of the “*presentism*” in a lot of current theses about the Information Society. *Post-modern times* are not the beginning of the Information Society, he argued. We are witnessing an ongoing process, more characterised by continuity rather than disruption.

This last statement was highly contested by the presentation of *Antonio Brandao Moniz*. Findings from the SOWING-survey in Portugal indicate that 77.1 % of the organizations engaged in restructuring processes are heavily influenced by information and communication technologies. As a consequence, Moniz expects an emergent globalisation in which networking of organizations is playing an important role. He pointed out that this process is generating risks to certain groups, which can increase social inequality. The “*risks generating potential*” of the Information Society was also a point of interest of Riita Lavikka’s presentation.

Returning to the discussion on the disorganization of organizations *Jörg Flecker*, based on the SOWING-results in Niederösterreich (Austria), argued that even with well-advanced ICT penetration in production and distribution, “creative knowledge work” is not becoming the dominant, let alone the only form of work. A large part of the “knowledge work” is not carried out by ‘knowledge workers’ but by “data workers” whose duties consist of routine tasks. Flecker and his colleagues agree that, as a result of the new technological infrastructure and the new design of the technologies, the conditions have been created for the relocation of work and co-operation over long distance. Nevertheless, they conclude that because of the necessary learning processes, knowledge management and the social preconditions for cooperative work, complex and creative ICT-based tasks are more often closely tied to one place. Of course, these limitations are heavily influenced by the experiences of the workers themselves. Minor steps for organizations in evolving in the direction of the Information Society are often major steps for the workers, personally experiencing every organizational change.

Riita Lavikka gave some evidence for this thesis. She raised the argument that what peo-

ple do in their work heavily affects their conceptions of self, their cognitive functioning, their values and orientation to the world around them. The technological, organizational and socio-economic changes affect the everyday experiences of work, the character of the workplace and the worker. While the industrial work used to have its primary impact on the body of the worker, knowledge intensive work has a primary impact on mind and heart, on personality and the self of the worker. New stress risks emerge as a result.

Concluding the presentations by arguing that we need more research would be a little bit too easy. Of course, a lot of additional analysis can be carried out in order to discover the real nature of the Information Society. However, monitoring the balance between the EINT and the “*Nothing is New-thesis*” (NINT), one can only conclude that maybe we have hybrid organizations, but definitely, we need hybrid organization theory!

Session 3: Information technology and the reconstruction of government

(report by *Michael Rader*, ITAS)

The public sector was not dealt with explicitly in the SOWING project although there are several links:

In the context of a global economy, an efficient public sector is playing an increasingly important role in decisions on the siting of industrial activities. An unsupportive local administration can contribute to driving away industry from a locality or region, just as a local administration can create an atmosphere attracting investors to set up shop locally. The measures to achieve this can include the active promotion of the locality or region as a location for industrial activity, a labour market providing suitably skilled potential staff, financial incentives including tax concessions or financial support for start-ups, and rapid and efficient licensing and decision-making processes for companies wishing to shift or change their activities. This was addressed in the presentation by Frank Webster in the opening plenary, who pointed out that “place imagery” was one of the few fields left where government could make its mark in a globalised society.

There is considerable pressure to make administrative processes less complicated and more efficient. "Lean government" and "one-stop government" are buzzwords frequently heard in this connection. "Lean" government implies that bureaucracies and regulations are pared down to what is absolutely necessary to fulfil exactly defined functions. "One-stop government" means that applicants now only have to address a single "entry point" in administration on a matter.

Over all, there is a change in attitudes and conceptions, including self-conceptions, of the public sector. Its task is regarded increasingly as the delivery of services to "customers" or "clients" of various types, including industry.

On the other side, the changes taking place in the industrial and commercial sector, in particular those concerning the delivery of services, which were described among the findings of the SOWING project in the opening session, can be recognised in the public sector too. The application of ICT provides the opportunity for organisational changes, which happens to coincide with the currently prevailing pressure to modernise the public sector. The application of ICTs also creates demands for new skills and competences among the employees of the public sector, as do the organisational changes taking place simultaneously.

The session started with a presentation by *Silke Beck* of the University of Bielefeld. Her contribution outlined the ideas behind a planned comparative project, currently involving teams from four European countries, two of them "established" EU members, the other two accession countries. The goal of the project is to identify factors important in the realisation of ICT applications in public administration and it covers a broad variety of applications and goals ranging from simple rationalisation to participation at the grass-roots level. The aim is to identify ways of reconciling the disparate goals of greater efficiency and cutting costs with democratisation. This includes an investigation of whether and how ICTs can provide new opportunities for participation.

Klaus Lenk of the University of Oldenburg is a co-author of a manifesto produced by two professional organisations, the *Gesellschaft für Informatik* and the *Informationstechnische Gesellschaft* in the *Verein Deutscher Elektro-*

techniker. He has been active in research on the use of ICT and government for about 30 years. His presentation highlighted the main points of the memorandum and drew a resumé of research in the field. One of Lenk's main findings is that there is little awareness in administration of any kind of relationship between organisation and ICT use, meaning that most applications are technology-driven. Research has been unable to pinpoint the relevant critical factors. A major finding has been that the constitution of government in Germany means that most experience in administering law is located at the local government level. There are currently no measures in place to bring this experience to higher levels, for example in the preparation of new laws. Lenk argued that it is important to bring together three types of skills to realise the reform of government by the involvement of ICTS:

- Awareness of the potentials of ICTs,
- Domain knowledge
- Design and engineering skills including fantasy.

Present research programmes tend to focus on such things as digital signatures, but it would be worthwhile to set up a special R&D programme for the field which should include observatory and evaluation functions.

Christian Friis (University of Roskilde) also stressed the technology focus of most ICT applications in administration. He argued that the approach should instead be starting from the benefits of technology for the functions demanded by society. The question "How does technology matter?" has not yet been answered satisfactorily.

Any transformation that has taken place has not been primarily due to technology. What can be seen to emerge is a division of knowledge replacing the previous division of labour. Government is also being replaced by *governance*. Friis argued that it might be fruitful to employ the approach of the information and knowledge management perspective and described a "very preliminary" framework for such a concept.

At the request of the conference organisers, *Rupert Schmutzer* of the Austrian Academy of Sciences focused on the relationship between public administration and industry. De-

spite calls for the rationalisation of government from industry, there is very little information available on the actual demand for public services from industry. This matches the lack of demand-driven approaches to devising ICT applications to be found in public administration. Common approaches focus either on so-called "life situations" (such as applying for a passport) or on "high frequency transactions", which are largely standardised and thus amenable to automation. Schmutzer concluded his presentation with an outlook on future developments. He foresaw a rapid increase of applications for electronic transactions, a trend towards service provision by public administrations and a growing number of applications for highly standardised data exchange, such as tax and customs. On the other hand, he felt that progress would be slow in the development of individualised services, such as plant licensing by industry.

Closing plenary session

The final point in the conference was a plenary presentation by *Professor Juliet Webster* (Trinity College, Ireland): "The value of women and men: gendering knowledge and skills in the Information Society". She picked up one of the main threads of the SOWING project by discussing questions of social exclusion against the background of gender differences.

She was concerned with the organisation of work and with the skills and forms of knowledge which are becoming most prevalent in low-grade service work in the Information Society. Her focus was specifically on two service sectors – retailing and retail financial services. She examined developments in the two sectors and the major forms of expertise or skill which characterise routine work. She emphasised particularly employers' desire for employees with "customer services skills" and "interpersonal skills" and examined how these skills are developed and conferred in workplaces, and the training which employers engage in. Juliet Webster addressed the question of whether these skills, once acquired by employees, are gendered, and if so, in what ways. Do new forms of skill, if they exist, enable their holders to move into what is often described as "knowledge work", and so in the long run improve their employability?

ANKÜNDIGUNGEN

Konferenzen/Workshops/Seminare

Den Kopf in den Sand? Über Gefahrenerkennung in der wissenschaftlich- technischen Zivilisation

Mülheim an der Ruhr, 12. - 14. Januar 2001

Für Lebewesen und Artgemeinschaften ist die rechtzeitige Erkennung von Gefahren mitentscheidend für ihr Überleben im „Kampf ums Dasein“. Deshalb haben sie in der Evolution wirkungsvolle Verfahren zur Gefahrenerkennung entwickelt.

Unsere wissenschaftlich-technische Zivilisation hat nun aber neuartige Groß-Risiken mit sich gebracht, für deren Erkennung der Mensch weder durch seine natürlichen Sinnesorgane noch durch bewährte gesellschaftliche Verfahren gerüstet ist. Daher rührt in nicht geringem Maße die gegenwärtige ökologische Bedrohung unsere Existenz. Die bisher im Zusammenwirken von Umweltwissenschaften, Politik und Justiz geübte Praxis zur Identifizierung von Gefahren ist schon deshalb unzureichend, weil man Gefahrenerkennung noch nicht einmal als erkenntnistheoretisches, geschweige denn als wissenschaftsorganisatorisches und politisches Problem hinreichend erfasst und diskutiert hat. Dies zeigt die Analyse von Fallbeispielen sehr deutlich. Eines der Hauptprobleme ist die Asymmetrie zwischen „Chancen“ und „Risiken“ mit den daraus resultierenden Interessenkonflikten. Die Chancen sind klar erkennbar, über kurze Kausalketten kurzfristig erreichbar und marktförmig privatisierbar. Hier liegen die ökonomischen Interessen und die kommerzielle Macht. Die „Risiken“ kommen meist über unüberschaubare Wirkungen und Nebenwirkungen durch die Hintertür und betreffen andere als die Nutznießer und Verursacher, oft erst künftige Generationen. Die an den Chancen Interessierten aber wollen die Risiken nicht sehen und stecken den Kopf in den Sand.

Die Politik – also die Gesetzgebung – und die Rechtsprechung stehen vor neuartigen